AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Twice amended) A thin arc segment magnet having a thickness of 1-4 mm and made of an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main component composition comprising 28-33 weight % of R and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co, said arc segment magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, a coercivity iHc of 1.1 MA/m (14 kOe) or more at room temperature, and an orientation $Br/4\pi I_{max}$ of 96% or more in an anisotropy-providing direction at room temperature , Br being a residual magnetic flux density, and $4\pi I_{max}$ being a maximum value of $4\pi I$ in a curve of $4\pi I$-H curve, wherein $4\pi I$ is the intensity of magnetization, and H is the intensity of a magnetic field.

5. (Twice amended) A radially anisotropic, arc segment magnet having an inner diameter of 100 mm or less and made of an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main component composition comprising 28-33 weight % of R and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co, said arc segment magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content

of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, a coercivity iHc of 1.1 MA/m (14 kOe) or more at room temperature, and an orientation [Br// / (Br// + Br⊥)] x 100 (%) of 85.5% or more at room temperature, said orientation being defined by a residual magnetic flux density Br// in a radial direction and a residual magnetic flux density Br⊥ in an axial direction perpendicular to said radial direction.

8. (Twice amended) A radially anisotropic ring magnet having an inner diameter of 100 mm or less and made of an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main component composition comprising 28-33 weight % of R and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co, said ring magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, a coercivity iHc of 1.1 MA/m (14 kOe) or more at room temperature, and an orientation [Br// / (Br// + Br⊥)] x 100 (%) of 85.5% or more at room temperature, said orientation being defined by a residual magnetic flux density Br// in a radial direction and a residual magnetic flux density Br⊥ in an axial direction perpendicular to the radial direction.

10. (Twice amended) A method for producing an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main component composition comprising 28-33 weight % of R

and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co, said rare earth sintered magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, and a coercivity iHc of 1.1 MA/m or more at room temperature, said method comprising the steps of finely pulverizing an alloy for said [R-T-B based] R-T-B-based, rare earth sintered magnet to an average particle size of 1-10 μm in a non-oxidizing atmosphere; introducing the resultant fine powder into a mixture liquid comprising 99.7-99.99 parts by weight of at least one oil selected from the group consisting of a mineral oil, a synthetic oil and a vegetable oil and 0.01-0.3 parts by weight of a nonionic surfactant and/or an anionic surfactant; subjecting the resultant slurry mixture to molding in a magnetic field; and carrying out oil removal, sintering and heat treatment in this order.

11. (Twice amended) The method for producing an [R-T-B based] R-T-B-based, rare earth sintered magnet according to claim 10, wherein the molding in a magnetic field is compression molding, and the compressed green body preferably has a density distribution of 4.3-4.7 g/cm^3 to provide an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main phase composed of an $R_2T_{14}B$ intermetallic compound[, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co].

12. (Twice amended) A method for producing a thin arc segment magnet having a thickness of 1-4 mm and made of an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main component composition comprising 28-33 weight % of R and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co, said arc segment magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, a coercivity iHc of 1.1 MA/m (14 kOe) or more at room temperature, and an orientation $Br/4\pi I_{max}$ of 96% or more in an anisotropy-providing direction at room temperature, Br being a residual magnetic flux density, and $4\pi I_{max}$ being a maximum value of $4\pi I$ in a curve of $4\pi I$-H curve, wherein $4\pi I$ is the intensity of magnetization, and H is the intensity of a magnetic field, said method comprising the steps of finely pulverizing an alloy for said [R-T-B based] R-T-B-based, rare earth sintered magnet to an average particle size of 1-10 μm in a non-oxidizing atmosphere; introducing the resultant fine powder into a mixture liquid comprising 99.7-99.99 parts by weight of at least one oil selected from the group consisting of a mineral oil, a synthetic oil and a vegetable oil and 0.01-0.3 parts by weight of a nonionic surfactant and/or an anionic surfactant; subjecting the resultant slurry mixture to molding in a magnetic field; and carrying out oil removal, sintering and heat treatment in this order.

13. (Twice amended) A method for producing a radially anisotropic, arc segment magnet having an inner diameter of 100 mm or less and made of an [R-T-B based] R-T-B-based,

rare earth sintered magnet having a main component composition comprising 28-33 weight % of R and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth element including Y, and T is Fe or Fe and Co, said arc segment magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, a coercivity iHc of 1.1 MA/m (14 kOe) or more at room temperature, and an orientation [Br// / (Br// + Br⊥)] x 100 (%) of 85.5% or more at room temperature, said orientation being defined by a residual magnetic flux density Br// in a radial direction and a residual magnetic flux density Br⊥ in an axial direction perpendicular to said radial direction, said method comprising the steps of finely pulverizing an alloy for said [R-T-B based] R-T-B-based, rare earth sintered magnet to an average particle size of 1-10 μm in a non-oxidizing atmosphere; introducing the resultant fine powder into a mixture liquid comprising 99.7-99.99 parts by weight of at least one oil selected from the group consisting of a mineral oil, a synthetic oil and a vegetable oil and 0.01-0.3 parts by weight of a nonionic surfactant and/or an anionic surfactant; subjecting the resultant slurry mixture to molding in a magnetic field; and carrying out oil removal, sintering and heat treatment in this order.

14. (Twice amended) A method for producing a radially anisotropic ring magnet having an inner diameter of 100 mm or less and made of an [R-T-B based] R-T-B-based, rare earth sintered magnet having a main component composition comprising 28-33 weight % of R and 0.8-1.5 weight % of B, the balance being substantially T, wherein R is at least one rare earth

element including Y, and T is Fe or Fe and Co, said ring magnet having an oxygen content of 0.3 weight % or less, a carbon content of 0.10 weight % or less and a nitrogen content of 0.15 weight % or less based on the total weight of the magnet, a density of 7.56 g/cm^3 or more, a coercivity iHc of 1.1 MA/m (14 kOe) or more at room temperature, and an orientation [Br// / (Br// + Br⊥)] x 100 (%) of 85.5% or more at room temperature, said orientation being defined by a residual magnetic flux density Br// in a radial direction and a residual magnetic flux density Br⊥ in an axial direction perpendicular to the radial direction, said method comprising the steps of finely pulverizing an alloy for said [R-T-B based] R-T-B-based, rare earth sintered magnet to an average particle size of 1-10 μm in a non-oxidizing atmosphere; introducing the resultant fine powder into a mixture liquid comprising 99.7-99.99 parts by weight of at least one oil selected from the group consisting of a mineral oil, a synthetic oil and a vegetable oil and 0.01-0.3 parts by weight of a nonionic surfactant and/or an anionic surfactant; subjecting the resultant slurry mixture to molding in a magnetic field; and carrying out oil removal, sintering and heat treatment in this order.